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Greyhound Canada





PROFILES

GREYHOUND CANADA

Four-Cycle Diesel Engines Save Fuel and Help the Environment

Canada's largest intercity bus company has launched a program to equip its fleet with fuel-efficient diesel engines to control maintenance and operating costs while contributing to a cleaner environment.



About the company

Greyhound Canada was founded in 1929 and now provides passenger bus service to more than 1100 towns and cities in Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the Northwest Territories. The company also operates an extensive charter service and Greyhound Courier Express, a national parcel-delivery service. The courier operation, which uses the inter-city buses, represents a major component of the company's business.

Greyhound currently operates 390 buses that travel a total of more than 64 million kilometres per year. The fleet is in a state of constant renewal, as new buses are regularly added and older ones retired.

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Addressing high fleet-fuel costs

Greyhound spends up to \$8 million per year on diesel fuel, so it is not surprising that company management is continually seeking measures that will improve fleet fuel efficiency. Each new initiative considered by the company is assessed in the context of Greyhound's overall operations, long-term plans and overriding commitment to customer service and safety.

One of the first options studied by the company was the potential to convert its fleet from diesel to an alternative transportation fuel. However, such a move was not considered practical at the time based on a number of factors:

- To support the parcel-delivery service, some of Greyhound's buses have been modified to tow trailers on inter-city routes. The engines in these buses must provide sufficient torque and horsepower to ensure that the bus-trailer combination performs satisfactorily and can achieve desired speeds on the highway.
- Greyhound takes pride in the company's ability to provide reliable and punctual service, which means that bus engines must operate efficiently in all weather conditions.
- Fuel availability is a critical issue on all routes, particularly those that travel through remote areas.

After carefully exploring the alternative fuel option, Greyhound decided to concentrate instead on improving the fuel efficiency of its diesel engines.

Computer monitoring and reduced maintenance requirements

Greyhound's new fourcycle engines are
equipped with computers that can help
control engine operations and support
proper progressive
shifting. The computers
also maintain a continuous log of such factors
as trip distance and
time, driving and idling

time, engine r.p.m., vehicle speed, fuel consumption and the number of brake applications.

In addition to significant fuel savings, Greyhound management is projecting reduced maintenance requirements for the four-cycle engines.
The new engines are expected to require a major overhaul every I.I million kilometres about half as often as the two-cycle engines.

Moving from two-cycle to four-cycle engines

In the early 1990s, Greyhound's entire bus fleet was powered by two-cycle diesel engines, most of which produced 300 horsepower or less. That situation began to change in 1994, when the company decided to field-test 350 horsepower, four-cycle engines in two buses.

The new engines produced significant fuel savings in the first year of operation, and four-cycle engines were subsequently installed in an additional 42 buses at a cost of \$2.5 million. As well, Greyhound instituted a formal policy of specifying four-cycle diesel engines in all new buses.

Early in the engine replacement program, the company discovered that in extremely cold weather the new engines did not provide adequate heat to ensure passenger comfort, which is a priority for Greyhound. To address this problem, management has stipulated that all new four-cycle engines be equipped with engine pre-heaters.



Although detailed evaluations are not yet complete, Greyhound's fleet managers are confident that the four-cycle engines will reduce fuel consumption by 20 to 25 per cent compared with the two-cycle engines. This will result in total savings of about \$300,000 per year for the 44 upgraded buses.

Maintaining a competitive edge

Greyhound's drivers have adapted quickly and efficiently to the four-cycle engines, due in part to training they received on revised shifting techniques and other operational requirements. The campaign to reduce fuel consumption through engine replacement has also been fully supported by the company's senior management.

By installing more fuel-efficient engines, Greyhound Canada is staying competitive in today's demanding transportation market while improving the company's environmental performance by reducing fuel consumption and exhaust emissions. Greyhound plans to continue to take advantage of future innovations in engine design, as well as improvements in lubricants, tires and other bus components, that will help the company maintain an efficient and reliable transportation and courier operation.



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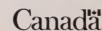
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